

Melverley, Burway Lane, Ludlow

Melverley is a stunning, high specification new eco build on Burway Lane in Ludlow. The project began in 2013 when Rosie Corke and Paul Weeden found a site in Ludlow on which to construct a new property. 2014 was spent on the planning process with their son Tim, a practising architect in London creating the initial design. Shrewsbury architects BASE were appointed to take the project forward.

An existing single storey timber framed property on the site nearing the end of its life was demolished in May 2015. Local builder Stuart Manley was appointed in October 2015, work began immediately and the house was completed in February 2017. Landscaping of the garden continued into 2018.

Rosie and Paul had clear ideas about the kind of house they wanted. Primarily it had to be warm so insulation was paramount and it had to be 'future proofed' for decreasing mobility. Other priorities included big south facing windows, large storage areas, a wood burning stove in the heart of the house and a modern shape referencing the style of Frank Lloyd Wright. In addition they wanted to build in as many sustainable features as possible, using natural materials, solar panels, green roofs and rainwater harvesting to aim for a Level 5 sustainable homes rating.

The finished house has achieved all of this and more and includes a number of highly distinctive features:

The two storey cranked layout provides extra space at both sides of the house compared with the former property which occupied the full width of the site. The overall 'footprint' is the same because of the second floor.

It is designed to the requirements of Life Time Homes and will maximize the use of sustainable strategies to get close to a zero carbon house.

The basic structure is timber frame, infilled with 300 mm of Warmcell, a shredded paper product for insulation. This is then covered internally with plaster and externally with slate stone cladding or a breathable render and paint (Keim).

The south facing walls are mainly double glazed with unencumbered double storey windows, giving the inside of the house maximum natural light and extensive views over open countryside, the Castle and the Mortimer Forest. The north facing windows are triple glazed, and much smaller to minimise heat loss and provide greater privacy.

The mono pitch zinc roof has a long life and is easily recyclable. It slopes to the south and is used for photovoltaics and solar panels. Rain water runs off into the rain water harvesting tank not into the main drains. The stored water is used for the downstairs toilets and

watering the garden. Water from the green roofs goes into soakaways. Water runoff from the site has been further limited by the use of permeable surface materials reducing the risk of flooding to other properties.

The large overhanging roof areas to the south provides shading for the large windows to restrict overheating in mid summer. There is a natural ventilation system of opening slatted panels in a sidewall and high level windows to create a through flow that cools the house.

Thermal mass is provided by a tiled floor that retains solar heat. There is a bed of crushed glass (Technopor) under the concrete foundations to reduce heat loss. The house is thermally very efficient with heat provided by direct sunlight, habitation (cooking, lights and people) and additional heating is required only in very cold weather. In addition to the underfloor heating, there are radiators on the upper floors (not currently needed); both are warm water systems powered by a gas boiler. A wood burning stove in the centre of the house provides additional warmth if required and is a focal point for the living area.

The downstairs open plan living area includes an extensive kitchen with a number of high tech features including a downward extraction system. Clever use is made of potentially 'wasted' space on the upstairs landing by using one side as an integral book case.

The present property lay out is very flexible for multiuse and, although it includes only one dedicated master bedroom with an en suite, other upstairs rooms could convert it to a three bedroom property.

The downstairs lounge with adjacent bathroom and toilet would enable that area to be used as an independent living unit if required. The plan of the house also allows for the installation of a stand alone lift or a stairlift to reach the upper floor.

The owners readily agree that this is not a truly sustainable build because of the high technical specifications and the costs. The carbon footprint of some of the materials, for example Chinese slate, would be very expensive to replicate. It is however, a marvellous experiment in the use of new building techniques.

Report written by Roger Furniss with significant help from Paul Weedon and Denise Thompson. Photographs by Roger Furniss.

